



1090 King Georges Post Rd. Suite 201, Edison, NJ 08837 908-225-6116

195014

TECHNICAL ASSISTANCE TEAM FOR EMERGENCY RESPONSE REMOVAL AND PREVENTION EPA CONTRACT 68-WO-0036

TO:

Dan Harkay, USEPA Region II

FROM:

Tom O'Neill, TAT PM

Michael Mentzel, TAT QC

SUBJECT:

Mercury Analytical Results for Soil Samples Collected on

14 May 1992

SITE:

Ideal Cooperage, Jersey City, New Jersey

TDD #:

02-9202-0001

DATE:

31 July 1992

Attached is the complete analytical data package received from the Roy F. Weston, Inc. laboratory on 29 May 1992 (Attachment A). The data is for the soil samples collected 14 May, 1992, at the Ideal Cooperage site, Jersey City, NJ, in the area of test pit #4. The sample data have been validated by the TAT inorganic data validator and found to be within all applicable quality assurance and quality control guidelines.

The Ideal Cooperage site is located at 39 New York Avenue, Jersey City, NJ. The site was used as an empty drum storage area by Ideal Cooperage Inc., who operated a steel drum reconditioning facility on an adjacent property. The site is approximately 1.3 acres in size and is relatively flat, with almost its entire perimeter steeply sloped downward from the property line on the south and west. Low brush and small trees cover the site. The site is fenced and there are no buildings or activity on the property. The site is bordered on the west and north by New York Avenue, on the south by the Conrail railroad line, and on the east by Sal-Son Trucking Company, Inc. The nearest residential areas are located approximately 1,000 feet from the site.

In May 1991, six test pit excavations were performed at various locations throughout the site as part of an EPA removal action. Surface and subsurface soil samples were collected at depths of 0 to 7.5 feet and submitted for laboratory analysis. The analysis revealed relatively low levels of organic compounds and metals, except for test pit #4, in which mercury was detected at 517 ppm at the 0-0.5 ft. depth. The mercury concentrations at the other five test pits ranged from <.01 ppm to 2.94 ppm. On 11 October 1991, three surface soil samples were collected in the area of test pit #4 to verify the original sample results. Analysis revealed Roy F. Weston, Inc.

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In Association with Foster Wheeler Enviresponse, Inc., Resource Applications, Inc., C.C. Johnson & Malhotra, P.C., R.E. Sarriera Associates, and GRB Environmental Services, Inc.

three surface soil samples were collected in the area of test pit #4 to verify the original sample results. Analysis revealed concentrations of 28.5 ppm, 113 ppm and 292 ppm of mercury.

On 14 May 1992, TAT and EPA returned to the site to further define the extent of mercury contamination at test pit #4. A systematic sampling grid measuring 60 feet by 60 feet was used to collect samples. Grid nodes were established at 10-foot intervals. All samples collected were analyzed for total mercury, additionally, samples from the grid nodes in the center of the grid system were analyzed for total inorganic mercury. Surface soil samples were collected at all locations and subsurface soil samples (12" depth) were collected at locations C-3A, C-4A, D-4A, D-5A and E-4A.

The greatest concentration of mercury (481 ppm total mercury) was found at location D-4 in the center of test pit #4. The concentration of mercury at D-4A was 25.8 ppm. The concentrations of mercury at the other locations tend to decrease away from the center of the test pit and with depth as shown when plotted on the original sampling grid (Attachment B).

At sample locations C-4 and E-3 the value for inorganic mercury exceeds the value for total mercury. As explained in the laboratory's analytical case narrative, the mercury at these locations can be assumed to be in the inorganic form.

Please call me if you have any questions.

Attachments:

cc: TAT PM
TDD File

ATTACHMENT A SAMPLE RESULTS

SAMPLE ANALYSES AND COLLECTION TIMES MAY 14, 1992 SAMPLING

				······································
SAMPLE	TYPE	TYPE OF	COLLECTION	
NUMBER	OF .	TOTAL	INORGANIC	TIME
	SAMPLE	Hg	Hg	
A-1	SURFACE	X		1050
A-4	•	, X		1045
A-7	•	X		1045
		•	^	
C-2	SURFACE	X	,	1100
C-3	,	x	x	0915
C-3A	SUBSURFACE	x		1015
C-4	SURFACE	X .	X	0915
C-4A	SUBSURFACE	X		1015
C-5	SURFACE	X	x	0920
C-6	"	X		1040
C-7	, , , , , , , , , , , , , , , , , , ,	X		1120
				
D-1	SURFACE	X		1055
D-2	n	X		1110
D-3	"	X	x	0920
D-4	,	X	X	0915
D-4A	SUBSURFACE	X		1020
D-5	SURFACE	X	x	0920
D-5A	SUBSURFACE	X		1020
D-6	SURFACE	X		1040
E-2	SURFACE	Х		1110
E-3	"	x	x	0920
E-4	"	X	x	0915
E-4A	SUBSURFACE	X		1030
E-5	SURFACE	X	x	0925
E-6	"	x	3 3 3 A	1040
				1040
F-3	SURFACE	X	·	1105
F-4	"	X		1105
F-5	n	X	* 1	1105
				1105
G-1	SURFACE	X		1055
G-4	SURFACE "	X		1100
G-7	#	X		
G-/	·			1055

MAY 14, 1992 SAMPLING

SAMPLE	TYPE	TYPE OF	ANALYSIS	SAMPLE RESULTS		
NUMBER	OF SAMPLE	TOTAL Hg	INORGANIC Hg	TOTAL (MG/KG)	INORGANIC (MG/KG)	
# 1 m						
A-1	SURFACE	X	17. 1. J. 18. 1. 17.	○ 0.63		
A-4	*	X		1.6	er a describilitation	
A-7		X		0.9		
	L QUESTAGE I			2.4		
C-2	SURFACE	X		7.7	5.0	
C-3	OUDOUDEACE	X	A 想到了这个人的最初的"种"等是是	10.4		
C-3A	SUBSURFACE	X	Y	88.8J	107J	
0-4	SURFACE	X	73900 55 06 SANS	4.4	Santa Caraga	
C-4A	SUBSURFACE	X-7-1-3	And the second	14.4	- 10 A A A A A A A A A A A A A A A A A A	
C-5	SURFACE	X	X		3.0	
C-6		X		1.4		
C-7		X	· January Carlotta	1.5	34779	
D-1	SURFACE	X		2.0	le de la companya de	
D-1 D-2	SUNFACE	X	in the state of th	3.4	A CONTRACTOR	
000000000000000000000000000000000000000	. S	^ X	X	1.4	1.8	
D-3		X	.	481	456	
D-4	CURCUREACE	X	X Standardard	25.8	-00	
D-4A	SUBSURFACE	X	X	30.2	24.4	
D-5	SURFACE	b:::::::::::::::::::::::::::::::::::::	or Francis	13.4	•	
D-5A	SUBSURFACE	X		3.1	5.347.2654	
D-6	SURFACE	X			renciation	
E-2	SURFACE	X		2.7		
E-3	JOHN AGE	X	X	4.3R	7.0H	
E-4	, ,	X	X	12.3	6.7	
E-4A	SUBSURFACE	X		1.1		
E-5	SURFACE	X	X	. 	ં ંે 18.7	
E-6	SUNFACE	X	Part and Assessment	12.8	(
				i de la Capital	A Park Company of Park (1994)	
F-3	SURFACE	X		3.1		
F-4		X		35.8		
F-5		x	i e ve Galar	31.2	Grane.	
	<u>P</u>			. 4.4.40		
G-1	SURFACE	X		2.0		
G-4	•	X		9.1		
G-7	,	X		11.0 /	S. Francis	
1 Field Blank	Aqueous	X		0.2 ug/kg	Jan Sagara	

<u>KEY</u>

J = Value Estimated. For C-4, Inorganic Hg > 10% Total Hg
For Z-1, CRDL standard recovery out of control

R = Value Rejected, Inorganic Mg > 50% Mg

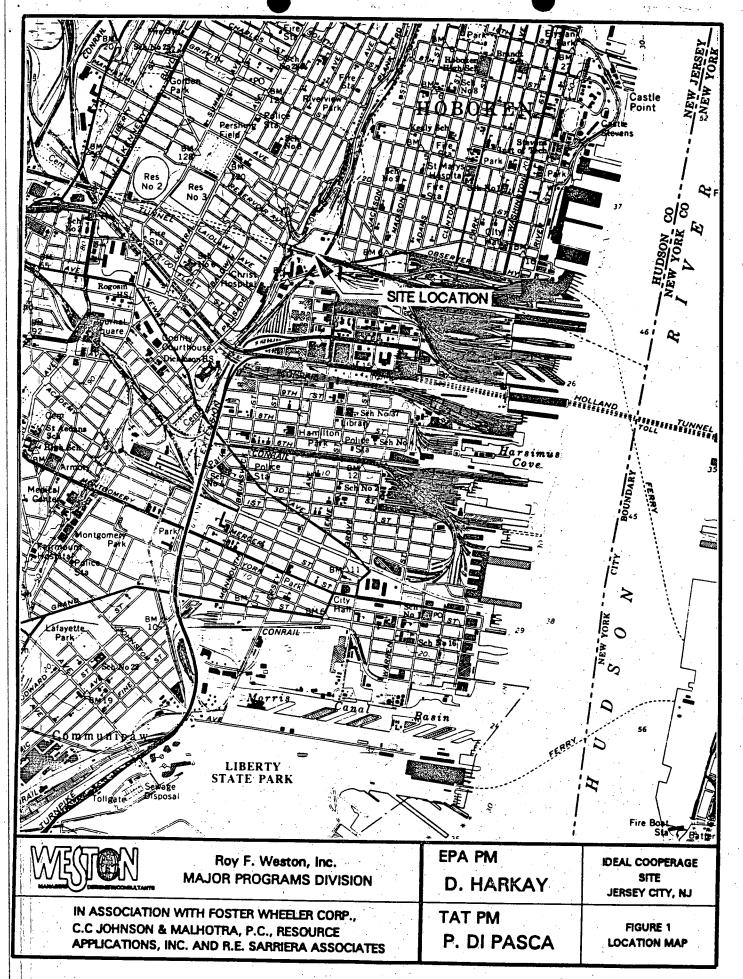
NOTE

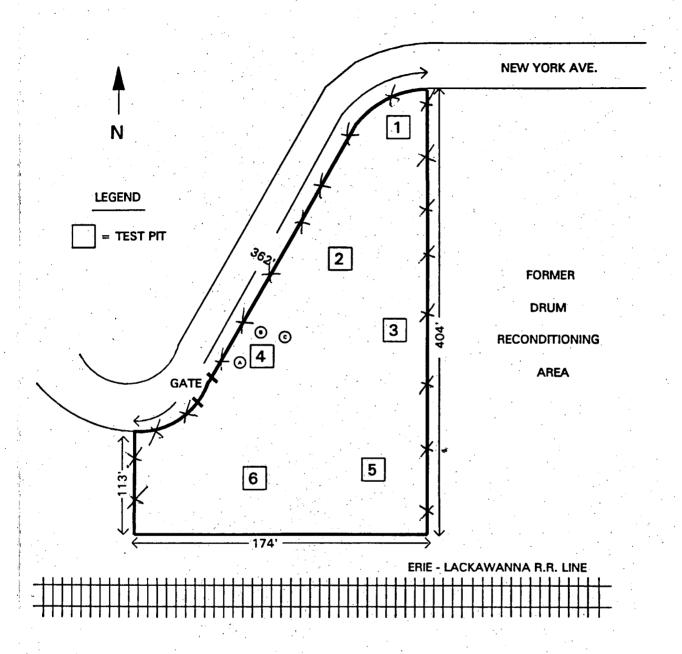
Surface samples collected at 0-6" depth. Subsurface samples collected at 12-18" depth;

ATTACHMENT B

SAMPLING GRID

Sitemapa





NOTES: ** cham Link June



Roy F. Weston, Inc.
MAJOR PROGRAMS DIVISION

IN ASSOCIATION WITH FOSTER WHEELER CORP., C.C. JOHNSON & MALHOTRA, P.C., RESOURCE APPLICATIONS, INC. AND R.E. SARRIERA ASSOCIATES EPA PM

D. HARKAY

TAT PM
P. DI PASCA

IDEAL COOPERAGE SITE JERSEY CITY, NJ

FIGURE 3
TEST PIT
LOCATION MAP

		– N		DEBRIS				
	G-1 O 2.0			G-4 O 9.1			G-7 O 11.0	
			F-3 O 3.1	F-4 O 36.8	F-5 O 31.2			
LINE		E-2 O 2.7	E-3 O 7.0 I 4.3	E-4 6.7 I O 12.3 E-4A 1.1	E-5 O 18.7 I 21.8	E-6 O 12.8		
FENCE LINE	D-1 O 2.0	D-2 O 3.4	D-3 O 1.81 1.4	D-4 456 I O 481 D-4A 25.8	D-5 24.4 I O 30.2 D-5A 13.4	D-6 O 3.1		DEBRIS
		C-2 O 2.4	C-3 5.0 I O 7.7 C-3A _{10.4}	C-4 107 I O 88.8 C-4A 4.4	C-5 O 3.01 14.4	C-6 O 1.4	C-7 O 1.5	
	A-1 O .63			A-4 O 1.6			A-7 O 0.9	
SATE				SHED STONE				
[V_V/I]	No.	·	F. Weston,	IC Hg - ALL OT	HER VALVES			L COOPERAGE
W	DESIGNERS/CONSULTANTS	MAJOR	PROGRAMS	DIVISION		ARKAY	JER	SITE ASEY CITY, NI
•	IN ASSOCIATIONS ON APPLICATIONS	& MALHOTRA	A, P.C., RESOL	JRCE	TAT T. O	PM 'NEILL		SAMPLING ID DIAGRAM

•

MICURY SOIL SAMPLE ANALOSES MAY 14, 1992 SAMPLING

SAMPLE	TYPE	TYPE OF ANALYSIS		SAMPLE RESULTS		
NUMBER	OF	TOTAL	INORGANIC	TOTAL	INORGANIC	
	SAMPLE	Hg	Hg	(MG/KG)	(MG/KG)	
A-1	SURFACE	X		0.63	Appendix	
A-1 A-4	SUNFACE	X	45,945,55	1.8	at for the state with the	
A-7	₽ 2.33	X		0.9	A LOCATION	
A-1/-						
C-2	SURFACE	X		-2.4	dien water	
C-3	,	X	X	7.7	5.0	
C-3A	SUBSURFACE	X		10:4		
C-4	SURFACE	X	X	88.8J	107J	
C-4A	SUBSURFACE	X		4.4	a ve la iv	
C-5	SURFACE	X	X	14.4	3.0	
C-6		างการการเกรียดกับคุดต่องต่องต่อตั้งตั้งตั้งตั้งการี้				
C-7	•	<u> </u>	<u> </u>	1.5		
					station with	
D-1	SURFACE	X		2.0	712.455 (EB\$7.50	
D-2		X		3.4 1.4	1.8	
D-3		X :	X	481	456	
D-4	OUDOUDEACE	X	a nez trok an utina	25.8	400	
D-4A D-5	SUBSURFACE SURFACE	X	X	30.2	24.4	
D-5A	SUBSURFACE	X		(.	F. F. 2003 & 575	
D-5A D-6	SURFACE	x		3.1	19 14 14 15 17 12 12 12 12 12 12 12 12 12 12 12 12 12	
	CONTROL			**************************************	a and and a	
E-2	SURFACE	X		2.7	7.12.30.1	
E-3	•	X	X	4.3R	7.0R	
E-4	#	X	X	12.3	6.7	
E-4A	SUBSURFACE	X		1.1		
E-5	SURFACE	X	X	21.8	18.7	
E-8	•	X		12.8		
*				· Stateman		
F-3	SURFACE	X				
F-4		X		36.8	planter of the second	
F-5	<u> </u>	X		31:2	12 3 3 4 13 13 13 13 13 13 13 13 13 13 13 13 13	
					Harris (x 24)	
G-1	SURFACE	X	radio en korali	2.0	Delanda Fi	
G-4	•	X		9.1	in the Call Anna?	
G-7	1:	X		11.0		
2.4		X		0.2 ug/kg	34 3 2773.7572.475	

KEY

J = Value Estimated. For C-4, Inorganic Hg > 10% Total Hg
For Z-1, CRDL standard recovery out of control

R = Value Rejected, Inorganic Hg > 50% Hg

NOTE

Surface samples collected at 0-6" depth. Subsurface samples collected at 12-18" depth.

		— N		DEBRIS				
1. App	G-1 O 2.0			G-4 O 9.1			G-7 O 11.0	/
- Opposition - The second			F-3 O 3.1	F-4 O 36.8	F-5 O 31.2			
LINE		E-2 O 2.7	E-3 O 7.0 I 4.3	E-4 6.7 I O 12.3 E-4A 1.1	E-5 O 18.7 I 21.8	E-6 O 12.8		
FENCE	D-1 O 2.0	D-2 O 3.4	D-3 O 1.81 1.4	D-4 456 I O 481 D-4A 25.8	D-5 24.4 I O 30.2 D-5A 13.4	D-6 O 3.1		DEBRIS
		C-2 O 2.4	C-3 5.0 I O 7.7 C-3A _{10.4}	C-4 107 I O 88.8 C-4A 4.4	C-5 O 3.01 14.4	C-6 O 1.4	C-7 O 1.5	
	ij.							
	A-1 O .63			A-4 O 1.6			A-7 O 0.9	
i i i i i i i i i i i i i i i i i i i			CRUS	HED STONE				
	. 1	Note* I = TOTA	L INORGANI	C Hg - ALL OT	HER VALVES	ARE TOTAL	Hg	
	DESCRIPTION SULLAND	· ·	F. Weston, I	and the second s	EPA D. H	PM ARKAY		AL COOPERAGE SITE RSEY CITY, NJ
	C.C JOHNSO	TION WITH FOST N & MALHOTRA NS, INC. AND R.E	, P.C., RESOU	RCE	TAT T. O	P M NEILL		SAMPLING LID DIAGRAM

MAY 14, 1992 SAMPLING

SAMPLE	TYPE	TYPE OF	ANALYSIS	SAMPLE RESULTS		
NUMBER	OF	TOTAL	INORGANIC	TOTAL	INORGANIC	
	SAMPLE	Hg	Hg	(MG/KG)	(MG/KG)	
	OUDEACE.	· · ·	1	0.62	in the second of	
A-1	SURFACE	X		0.63		
A-4						
A-7	<u> </u>	X	1	0.9		
C-2	SURFACE	х		2.4		
C-3	JOHFAGE	î x	X	7.7	5.0	
C-3A	SUBSURFACE	x		10.4	44743 3 34	
0-3A C-4	SURFACE	x	X	88.8J	107J	
C-4A	SUBSURFACE	ĺχ		4.4	agragi sebabahan	
C-5	SURFACE	â	X	14.4	3.0	
C-6	OUTR AOL	Î x		1.4	49	
C-7	•	x		1.5	2.20.10s.148.1653	
<u> </u>						
D-1	SURFACE	X		2.0		
D-2	JOIN AGE	x		3.4	24.534.534.544	
D-3		x	X	1.4	1.8	
D-3 D-4	•	â	Ŷ	481	456	
D-4A	SUBSURFACE	X	6, 1, 2478	25.8	. Depois Depois	
D-4A D-5	SURFACE	X	X	30.2	24.4	
D-5A	SUBSURFACE	X	\$1.25 \$1.25	13.4	Market .	
D-6	SURFACE	x	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3.1	11.00	
D=0	SURFACE			angunga.	G G S I West W	
E-2	SURFACE	1 x		2.7	F. FEFF- SAFESA	
E-3	JOHI AGE	Ŷ	X	4.3R	7.0R	
E-4		X	X	*******************	6.7	
E-4A	SUBSURFACE	Ŷ		1.1	3	
E-5	SURFACE	X	X		-≥::18:7°	
E-8	JONI ACE	X	^	12.8		
				21-4-1-3-1-3-C	ring vitolo	
F-3	SURFACE	X		3.1		
F-4	JULI AUL	X		35.8	Sec. (2.37.85)	
F-5		X		31.2	FT 7.5554.5	
1-0						
G-1	SURFACE	X		2.0		
G-4	#	X		9.1	S.25.17.16.A.22	
G-7		X		11.0	file function	
<u>\</u> \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	<u> </u>			A AP. I. F		
Z-1 Field Blank	T Agussus	X		0.2		
redu DIAHK	Aqueous		1	0.2 ug/kg		

KEY

J = Value Estimated. For C-4, Inorganic Hg > 10% Total Hg
For Z-1, CRDL standard recovery out of control

R = Value Rejected, Inorganic Hg > 50% Hg

NOTE

Surface samples collected at 0-6" depth. Subsurface samples collected at 12-18" depth.